**How much waste do we produce?**

**Aim:**

Students will examine the amount of waste created by the average American.

Students will discuss the environmental impact of this waster and explore different ways to reduce it – through reusing, recycling and composting.

**Do Now:** How can I create less garbage?

Procedure: Prior to beginning the lesson, collect examples of waste. Each item should be labeled with a different color sticker. For example, you might have a glass jar with a red sticker, another glass jar with a blue sticker and a third jar with a green sticker. You would do the same for aluminum cans, paper products, etc… Next have handy items that can be recycled, reused or composted, as well as items that are garbage. Place these items around the garden or the classroom.

Begin by asking students what type of bottle they would use if they were thirsty. Show students a reusable water bottle filled with water, a plastic bottle of water, and a plastic soda bottle. Have students turn to their neighbor and discuss what they think the best answer is. After a quick discussion, elicit responses. Using the students responses, explain what the best response would be.

Next, tell students that today they will be learning about garbage. Students will take a short, informal quiz to see how much they already know.

After the quiz, students will be given math problems to work on. Putting students in pairs, ask students how much garbage they would produce in a week if they produced 3 pounds of garbage a day. Have students explain their answers. Next, ask students how much garbage they would produce in a month if they produced 21 pounds of garbage in a week. Again, have students work in pairs and go over their responses. After discussing how much waste is produced, ask students what we can do inside and in the garden that can help us reduce the amount of waste we produce.

Activity:

Tell students they are going to play a game. They are going to be part of a team. Each team is going to have two jobs. Have students look around the garden (or classroom) and they will see it is filled with garbage. Explain that each team will have to pick up garbage, but only the garbage that belongs to their team. The red team will pick up garbage with a red sticker, the blue team the garbage with the blue label and the green team the garbage with the green label. Explain to students they will receive points for each piece of garbage they collect. Break students up into groups and explain that they will have five minutes to collect all the garbage that belongs to their team. Tell students that when they hear the whistle, their time is up.

After collecting all the waste in the garden, have students remain in their groups. Give each group a reuse, recycle, compost, garbage sheet. Have students look at the four categories/choices. Explain to students that now that they have collected all the garbage, they have to figure out what to do with it. Ask students to explain what the job of each choice does. Next, refer students to the bottom of the page. Each item that students pick up is multiplied by a number. An item that can be reused is multiplied by 4, composted by 3, recycled by 2, and garbage by 1. Ask students why they think the point values are tallied that way. Next, have each group sort their waste in the four categories and tally their points. While students are sorting their waste, ask students if they think the other teams are sorting their waste into the correct category.

Finally, go over the groups tallies. Ask students what they learned about waste and ask them to share with the class one way they can reduce the amount of garbage in their lives.

**Standards**

**CCSS: Math Grade 3**: Represent and solve problems involving multiplication and division.

**ELA, Grade 2, SL1**: Participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups.